

Operations and Activities in INDIA



Japan International
Cooperation Agency

Water



Forestry & Agriculture



Transport



Energy



2018-19

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Foreword

Strengthening the cooperation between India & Japan



Mr. Katsuo Matsumoto
Chief Representative, JICA India

Actively continue to cooperate with the government of India for infrastructure development, poverty alleviation, environment conservation, sustainable growth and so on, with mutual trust.

India has become the largest development partner of Official Development Assistance (ODA) from Japan. Under the policy of the Government of Japan, JICA has extended concessional loans, technical cooperation and grant-aid in an integrated manner to support socio-economic development efforts of the Government of India. In addition to the conventional aid modalities, JICA has also extended cooperation on private partnership, science and technology and people to people exchange program. We are keen to contribute to improvement of living standards of people through various type of development approaches.

For India to achieve sustainable overall socio-economic development, it is imperative that improvement of infrastructure such as railways, roads, power, water/ sanitation, hospitals and environment conservation are taken up on priority. To ensure this, JICA will continue to support development projects in urban and rural areas by emphasizing the concept of "quality infrastructure" that contains reliable, sustainable, environment friendly and resilient aspects.

JICA's focus for the future is to provide support towards sustainable development and inclusive growth. We will align our projects with India's national priorities and long-term vision. Cross cutting issues such as adequate environmental and social considerations, gender mainstreaming and ensuring human security are also encouraged. In our pursuit to realize effective support, it is necessary to build partnerships with relevant organizations including civil organizations and social enterprises.

We wish that this brochure can help readers' understanding of JICA's operation in India.



2 JICA & Official Development Assistance

A bridge linking Japan with the emerging countries



A self-help group member showing her log book of daily sale done under her business started with microfinancing scheme of West Bengal Forest and Biodiversity Conservation



Community Toilets built under the Odisha Integrated Sanitation Improvement Project

About JICA

JICA is an independent administrative institution under the Government of Japan, established with the aim of promoting international cooperation. JICA works as a bridge between Japan and emerging countries, and provides assistance in forms of loan, grant and technical cooperation in an integrated manner so that the developing countries can strengthen their capacities.

JICA's Vision: Leading the World with Trust

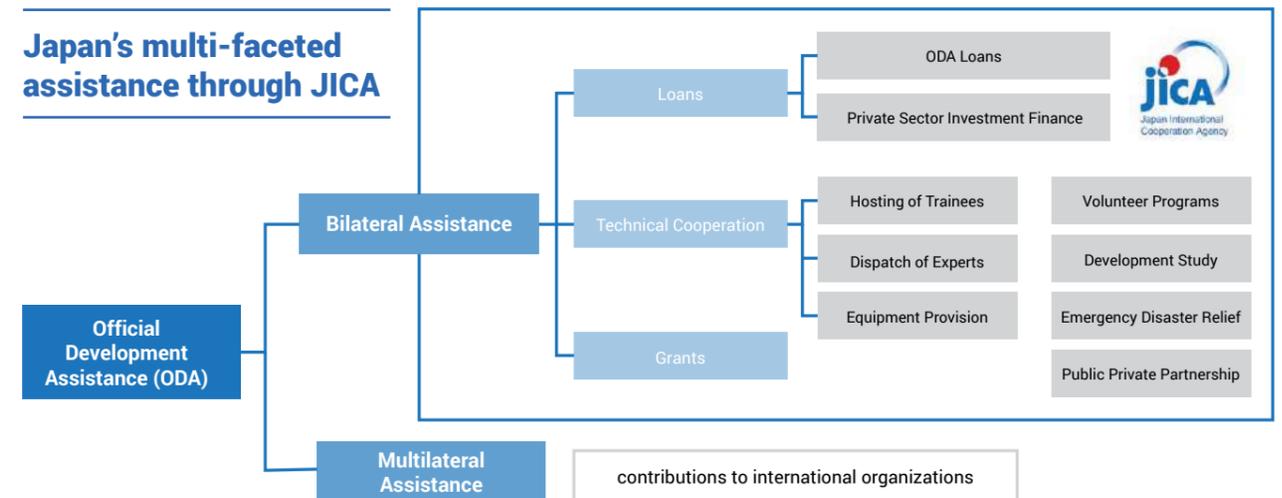
JICA, with its partners, will take the lead in forging bonds of trust across the world, aspiring for a free, peaceful and prosperous world where people can hope for a better future and explore their diverse potentials. The concept of trust is the backbone of Japan's development cooperation. JICA fosters trust with a

range of domestic and international partners by putting themselves in their partners' shoes and thinking with them as equal partners. JICA will explore the diverse potentials of people, countries and private enterprises for a better future. And JICA, with its partners, will create a world where all people and countries are bound together by the trust.

What is Official Development Assistance?

Official Development Assistance, ODA, is undertaken by governments or government agencies to promote economic development and welfare in emerging countries. Since 1954, Japan has been providing financial and technical assistance through ODA, and the features of Japanese ODA have been promotion of self-help, sustainable economic growth and human security in emerging countries.

Japan's multi-faceted assistance through JICA



The JICA experts at The Capacity Development Project on Highways in Mountainous Regions

ODA Loan

ODA loans support emerging countries by providing low-interest, long-term and concessional funds to finance their development efforts. ODA loans are normally used for large-scale infrastructure and other forms of development that require substantial funds. ODA loans, which require repayment, promote efficient use of the borrowed funds and appropriate supervision of the project they finance, thereby underpinning emerging countries' ownership in the development process.

Grant Aid

Grant aid is the provision of funds to emerging countries without the obligation for repayment. Grant aid is used for the of social and economic



Champions of Societal Management

infrastructure such as for advanced transportation system, primary and secondary education, health and medical care, the environment and other areas.

Technical Cooperation

For human resource development and the formulation of administrative systems of emerging countries, technical cooperation is extended. It involves dispatch of experts, provision of necessary equipment and training of personnel from emerging countries in Japan and other countries for co-creation of knowledge. Cooperation plans can be tailored to address a broad range of issues.

3 JICA & INDIA

Japan's partnership with India is for nearly 62 years.

Japan's ODA to India started in 1958, when a concessionary ODA loan of 18 billion Japanese Yen was extended to supplement the implementation of the 2nd Five-Year Plan, at the request of the then Prime Minister, Jawaharlal Nehru. India was then the first recipient in the world of Japanese ODA loan. Since then, over 5,730 billion Japanese Yen (approximately Rs. 3,50,000 crores) in ODA loans have been committed for development across various sectors. Technical Cooperation with India started in 1966. One of the early instances was establishment of Indo-Japanese Agricultural Extension Centres across the country, in which the Japanese method of paddy cultivation was

introduced and model farms were set up to contribute towards achieving food self-sufficiency in India. Since then, nearly 8,500 Indian personnel have participated in training courses in Japan and over 8,800 Japanese experts have come to India to offer their expertise.

Grant aid has also covered various areas in India including construction of hospitals and health facilities, and providing equipment for educational institutions.

Today, JICA is the world's largest bilateral aid agency and India is its largest development partner.

OPERATIONS IN INDIA: FY 2018-19

ODA LOAN



COMMITMENT

537.405 billion Yen
(approximately Rs.32,768 crore, World's biggest recipient)



DISBURSEMENT

266.011 billion Yen
(approximately Rs 14,934 crore, World's biggest recipient)



NO. OF ONGOING PROJECTS

72

GRANT AID



1.619 BILLION YEN

(approx Rs. 213.21 crore)



NO. OF ONGOING PROJECTS

2

*Currency rate JPY 1.65/INR is applied for the sake of explanation.

TECHNICAL COOPERATION



325 Indians visited Japan



1,404 Japanese experts dispatched to India

CITIZEN PARTICIPATION



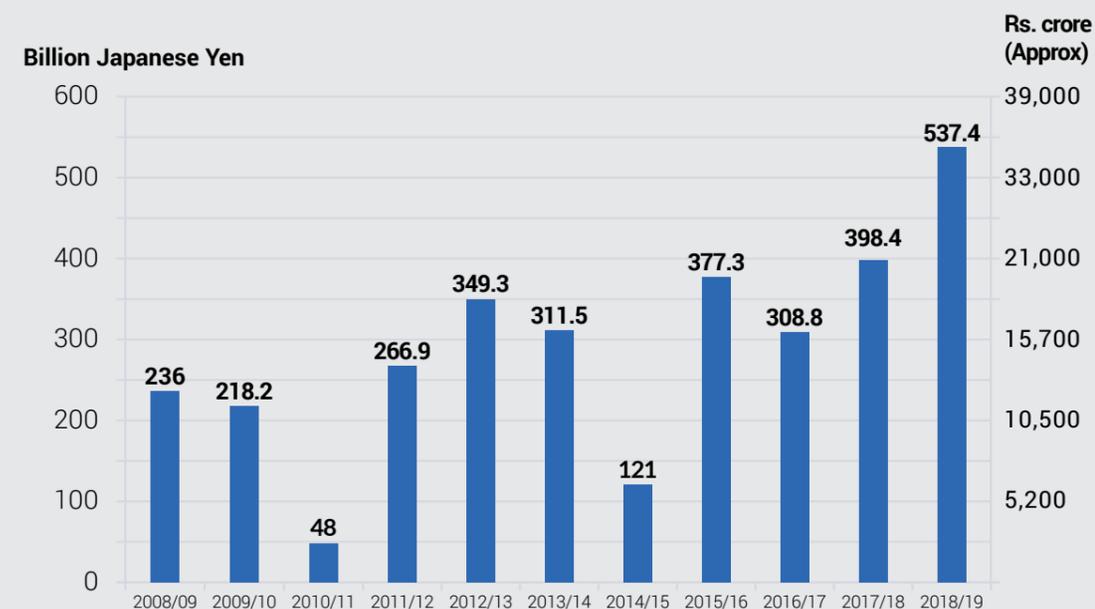
Japanese Volunteers: 15
for Japanese language education, special education and instructor, community development



Japanese NGO activities:
Working with Indian Partner: 4

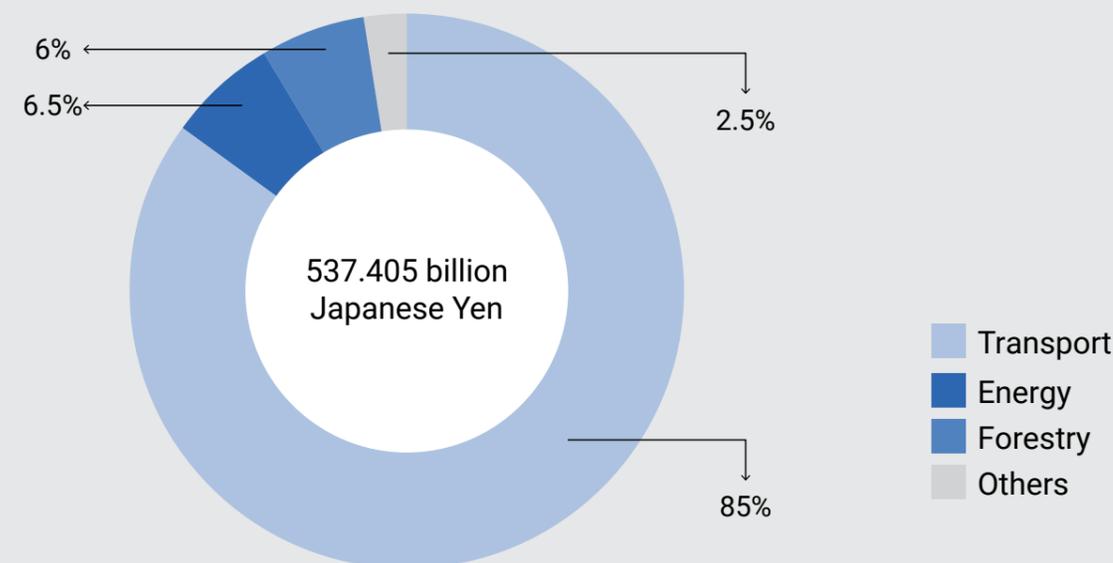
JICA's Assistance

Trends in ODA Loan Commitment for the Past 10 Years (FY 2008/09 - 2018/19)

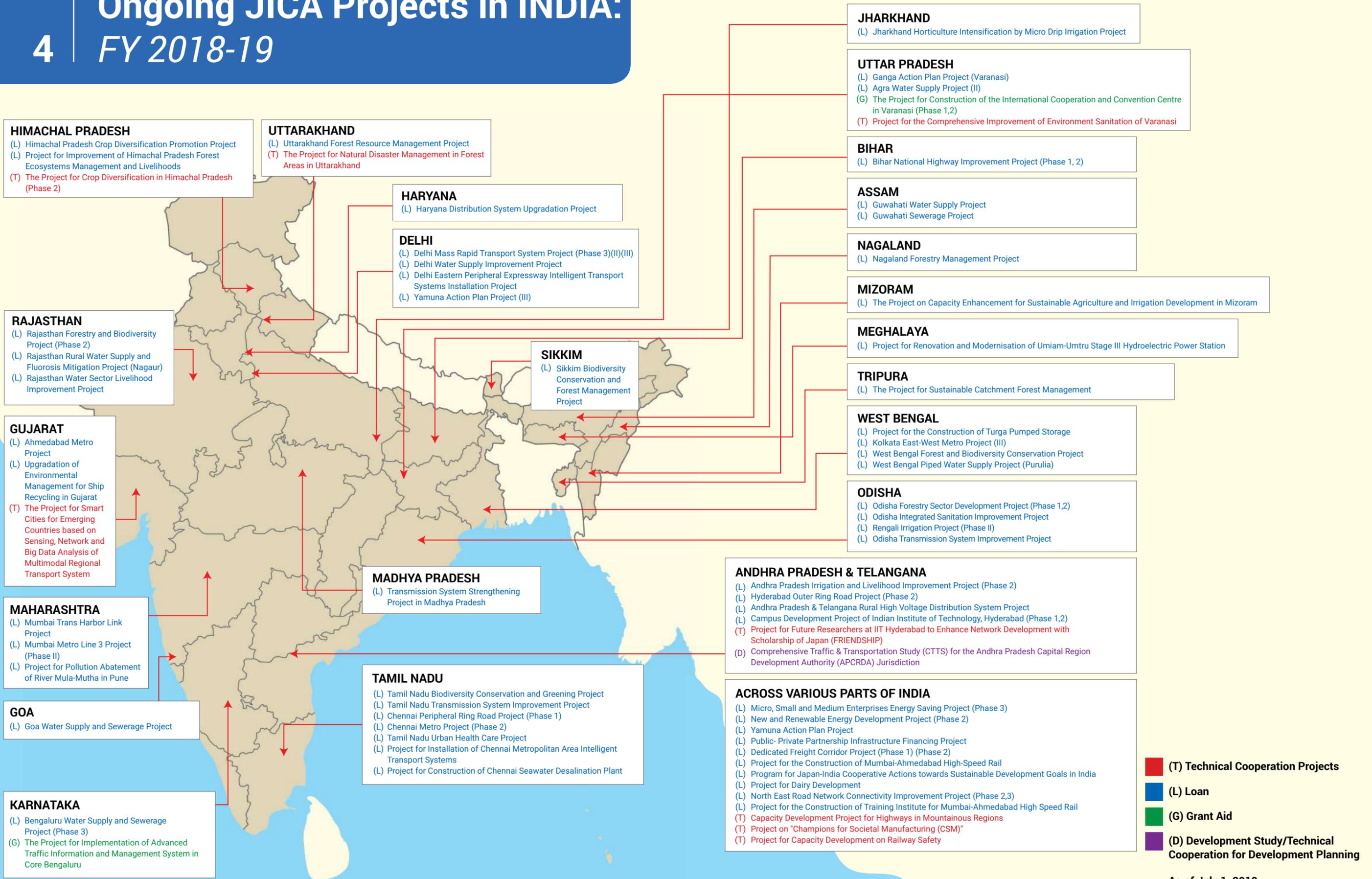


*The great East Japan Earthquake occurred in FY2010/11
*Prime Minister Modi's new administration in FY2014/15

Trends in ODA Loan Commitment by Sector (FY18/19)



Ongoing JICA Projects in INDIA: 4 FY 2018-19



As of July 1, 2019

5 Transport

► Sector Challenges

The transport system in India, comprising of roads, railways, ports and air services, is one of the largest in the world. However, the efficiency of the transport system is low, since the average speed of movement through road, rail and coastal ships are lower than those in developed economies. The Union Budget 2018-19 presented in March 2018, mentions that India needs investment worth INR 50 lakh crore in the infrastructure sector. Therefore, JICA's contribution in the sector is of utmost importance.

► Overview of Japan's Cooperation

JICA has transport projects all over India, both in mega cities and in rural areas, amounting to ODA loan of over 2,900 billion Japanese Yen (approximately INR 101,250 crore) extended since 1982/83. JICA supports various aspects of transport, such as formulation of masterplans, assistance for the introduction of related technologies, construction of roads, bridges, railways, metros, and more.



A Japanese expert at the construction site of the Ahmedabad Metro Project

► Figures at a Glance



JICA facilitated construction for over 400 km of metro rail network across 6 cities



Facilitated 4-laning of 220 km (approximately) of National Highway 82 (NH 82) and National Highway 83 (NH 83) in Bihar.



64 ODA Loans, 2 Grant Aid and 24 Technical Cooperation's have been extended for the sector in India



Bihar National Highway Improvement Project

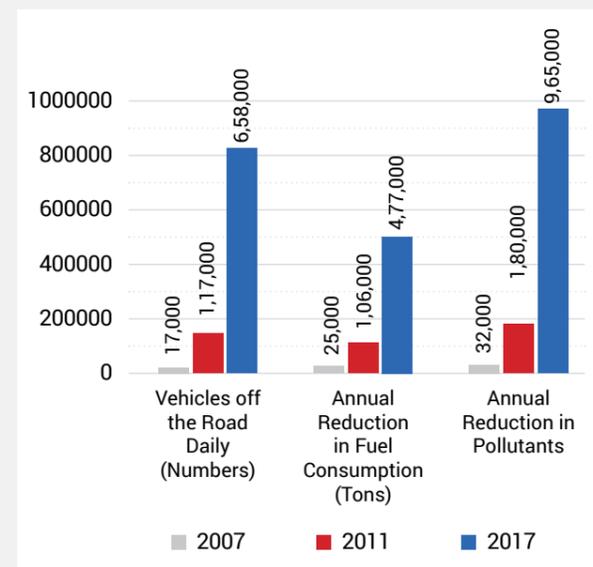
► An Example of JICA's Support

JICA is supporting the development of the Delhi Metro. It is the first rail-based system in the world to claim Carbon Credits for its Regenerative -Braking and Modal Shift Projects.

Delhi Metro is the highest generator of Solar Power (23 MWp) in the transportation sector in India.

All stations opened so far in Phase-3 have been rated as 'Platinum' by the Indian Green Building Council for adherence to Green Building norms.

Benefits from JICA funded Delhi Metro



Achievements

- JICA supports the development of Delhi Metro which has a daily ridership of 2.7 million passengers as well as metro projects in other cities including Ahmedabad, Mumbai, Bengaluru, Kolkata and Chennai.
- JICA has been supporting the dedicated freight corridor between Delhi and Mumbai, which deploys an automated signal and communication system.
- JICA's support for the Bengaluru Intelligent Transport Systems will improve travel speed in the city.
- Through its grant based technical assistance, JICA dispatched Japanese experts to develop an Intelligent Transport System for the Hyderabad outer ring road. Amongst the first in India, a closed type of toll collection system to pay toll for the actual distance travelled is being implemented in Hyderabad under JICA's assistance.



Delhi Metro Pink Line



Ongoing construction at Mumbai Trans Harbour Link Project

JICA's Strategy for Future

JICA aims to construct an efficient traffic system to meet increasing traffic demands, mitigate traffic congestion, thereby reducing pollution. JICA has been proactively supporting metro systems in Chennai, Mumbai, Delhi, Bengaluru, Kolkata and Ahmedabad to install a smart way of mobility in the country. JICA's cooperation to develop the state-of-the-art Mumbai-Ahmedabad high speed rail project, is a shining example of JICA's vision for the transportation sector in India. Similarly, JICA has been promoting Intelligent Transport Systems in the country to improve travel speed and reduce traffic congestion.

6 Water & Sanitation

► Sector Challenges

It's a matter of concern that 600 million people in India face considerable amount of water stress in the country. About three-fourth of the households in the country do not have drinking water at their premise. With nearly 70% of water being contaminated, India is placed at 120th amongst 122 countries in the water quality index. India lacks appropriate water sewerage infrastructure, with a large number of population defecating in the open. Diarrheal diseases and its complications account for 9% of cause of death of children under five, most caused by oral infection of bacteria in excretion, (2015). It is pertinent, for JICA to

proactively contribute to the sector, in order to reduce water-borne diseases and improve drinking water quality in India.

► Overview of Japan's Cooperation

Japan's support to India consists of ODA loans of over 722 billion Japanese Yen (approximately INR 46,000 crore) towards Water and Sanitation.

JICA has assisted several Water and Sanitation Projects in India, including Assam, Odisha, Goa, Rajasthan, Delhi, Tamil Nadu and Karnataka amongst other states.



Measuring the purity of water at Hogenakkal Water Supply and Fluorosis Mitigation Project



The pipeline will carry safe surface water from water treatment plant, free from fluorine contamination to the people of Nagaur under the Rajasthan Rural Water Supply and Fluorosis Mitigation Project

► Figures at a Glance



Total number of beneficiaries of JICA's projects

Water Supply: approximately 30 million (3 crore) people

Sanitation : approximately 15 million (1.5 crore people)



35 ODA Loans, 4 Grant Aids and 12 Technical Cooperation's have been extended for the sector in India

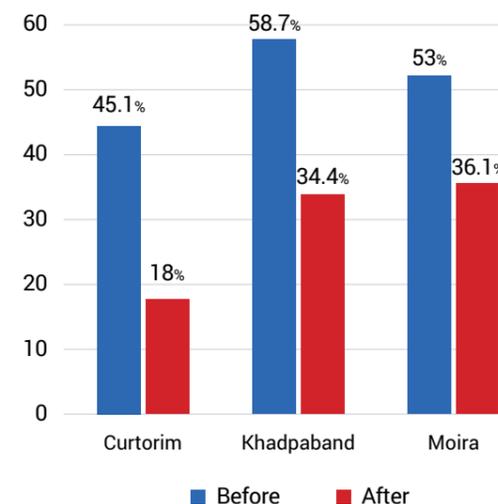


International award winning process installed under Agra Water Supply Project – showcasing the excellent drinking water quality achieved as compared to turbid & coloured raw water of Yamuna River

► An Example of JICA's Support

To reduce non-revenue water, renewal of water pipes, meters and Supervisory Control And Data Acquisition (SCADA) Systems are implemented in various JICA projects like in Goa, Delhi and Rajasthan. Capacity development is also addressed. With JICA's support, 3 pilot sites (Curtoirim, Khadpaband and Moira) were selected in Goa, where several activities were conducted through On-the- Job-Training (OJT) and other training programs, in order to reduce non-revenue water.

Reduction in Non-revenue water in JICA – supported Goa Water Supply & Sewerage Project (percentage)



Achievements

- Ganga and Yamuna Action Plan Project, supported by JICA aim to augment sewage treatment capacity by constructing and renovating sewage treatment plants (STP) and sewer lines for improved sanitary conditions of the dependent communities. The STP is expected to treat the sewage generated for over 4 million people in the country.
- JICA has been strongly supporting the development of water supply and sewerage treatment through Bangalore Water Supply and Sewerage Project for residential, commercial and industrial areas, together with introduction of volumetric based tariff system, metering system, non-revenue water reduction activities, and promotion of recycle/reuse of wastewater.
- Safe water is now widely distributed in Nagaur, Rajasthan with the JICA supported-Rajasthan Rural Water Supply and Fluorosis Mitigation Project.



130 Km of gravity pipeline laid to carry Ganga Water from Palra under Agra Water Supply Project to supply safe drinking water to the citizens of Agra & Mathura



The women are being taught to segregate the waste generated at home under Kolkata Waste Solid Management Project

JICA's Strategy for Future

Due to acute shortage of water in the country, JICA recognizes the critical need for supplying safe drinking and equitable water to the people. JICA aims to introduce innovative solutions for water treatment in pursuit of finding feasible solutions to diversify water sources in the country. JICA aims to save water by large-scale and long-term rainwater storage and promote effective utilization of underground space for potable water. JICA lays utmost emphasis on Water and Sanitation and is in line with the Prime Minister's Jal Jeevan Mission.

7 Energy

► Sector Challenges

In order to meet the increasing demand for electricity in the country, massive addition to the installed generating capacity is required in India's Energy Sector.

Despite the fact that India has surplus energy, it is facing huge problems which serve as an obstacle for supplying electricity to all needy people. Around 25% of the generated power is lost in transmission in India, making it difficult for distribution.

Despite the fact that India has the third largest coal reserves in the world, most of the domestic requirements are met through imports due to poor quality of coal and increasing renewable energy

requirement. JICA's support in the sector improves energy production, thereby bridging the gap.

► Overview of Japan's Cooperation

JICA has extended Official Development Assistance loan of 1,559 billion Japanese Yen (approximately INR 95,000 Crore) cumulatively since 1958/59 to enhance energy availability in India.

JICA is supporting Energy Projects in India across Andhra Pradesh, Telangana, Haryana, Madhya Pradesh, Tamil Nadu, Odisha, Meghalaya, West Bengal and various other cities.



Sub-station to improve electricity supply under Tamil Nadu Investment Promotion Program



JICA and IREDA officials planting sapling together at the site of wind energy park at Madalacheruvu, Andhra Pradesh as a symbol of collaboration for renewable energy

► Figures at a Glance



JICA's ODA loan to Indian Renewable Energy Development Agency (IREDA) provided financial assistance to 36 sub-projects including solar, wind and small hydro projects.



JICA supports more than 5,000 energy efficiency projects.



88 ODA Loan Projects and 6 Grant Aids have been extended for the sector in India.



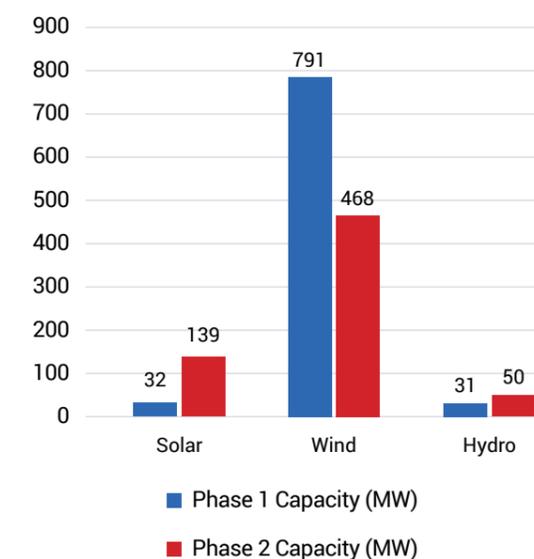
The hydro electric power project

► An Example of JICA's Support

JICA has extended 18,590 million Japanese Yen (approximately INR 1,110 crore) in ODA loans to facilitate reliable power supply for agriculture in Andhra Pradesh & Telangana, across 16 rural districts.

JICA believes that Japan's expertise in the energy sector and renewable energy systems can help India in becoming self-sustainable and energy efficient. Therefore JICA has been extending support towards Solar, Wind and Hydro Energy through IREDA.

Outline of JICA's support through IREDA



Achievements

- JICA supported projects have contributed about 9.3GW to India's total installed capacity of about 350GW.
- With JICA's support the Haryana Transmission System Project has been setting examples of good practices in the sector by achieving the lowest transmission loss of 2.2% (lowest in India), which was 2.7% before the Project started.
- JICA supported the Purulia Pumped Storage Project which has maximum output of 900MW and holds about 12% of peak-time output for West Bengal.
- Under the Andhra Pradesh & Telangana Rural High Voltage Distribution System Project over 31,000 km of high voltage Direct Current lines.



Solar panels



Windmill

JICA's Strategy for Future

JICA recognizes the need for robust growth in the energy sector in a sustainable manner. It aims to promote the modernizing energy sector in India through renewable energy and energy efficiency. JICA's vision is in line with the Government of India's 'Vision 2022'. JICA will also continue supporting the sector by modernization of transmission & distribution lines, promotion of energy efficiency & conservation projects, new and renewable energy initiatives and grid stabilization in the country.

8 Forestry

► Sector Challenges

The livelihood of most inhabitants in rural and tribal area is heavily dependent directly or indirectly upon forest resources. They largely live off the land, putting undue pressure on the natural forests around them. This has led to degradation of forests and depletion of forest resources across the country. JICA's support in the sector helps in upgradation and renovation of these forest lands, thereby improving forest resources.

► Overview of Japan's Cooperation

Japan's support to India consists of ODA loans of 270 billion Japanese Yen (approximately INR 16,300 Crore) since 1991/92 towards the Forestry Sector.

JICA has extended loans for the forestry sector across Gujarat, Haryana, Himachal Pradesh, Karnataka, Tamil Nadu, Nagaland, Odisha, Sikkim, Rajasthan, Uttarakhand, West Bengal, Punjab, Uttar Pradesh and Tripura.



Members of Forest Management Union in Tripura introducing the rules and activities of the Forest Management, Tripura Forest Environmental Improvement and Poverty Alleviation Project



Meeting of JICA team with the Self Help Group members of West Bengal Forest and Biodiversity Conservation Project

► Figures at a Glance

-  JICA has 27 forestry and natural resource management projects in India
-  Plantation activities under JICA supported projects have covered close to 3 million hectares across 14 states
-  Over 18,000 Joint Forest Management (JFM) committees and 24,000 Self-Help Groups (SHGs) have been formed under JICA projects



Conservation of biodiversity and anti-poaching of wildlife under West Bengal Forest and Biodiversity Conservation Project

► An Example of JICA's Support

Odisha Forestry Sector Development Project (OFSDP) (2006-2015) by JICA has facilitated sustainable forest resource management across the state. Under the Project, 210,405 hectares of degraded forests have been restored and 2,920 hectares of coastal plantations undertaken. The Project aims to restore degraded forests and improve the income level of the villagers by promoting sustainable forest management.

OFSDP's Impact Study : Project Targets vs. Achievements

Component	Project Target	Project Achievements
Restoration of Degraded Forests	196,650 hectares	210,405 hectares
Coastal Plantation	2,810 hectares	2,920 hectares
Ecotourism Destination Development	5 Sites	7 Sites
Income Generation Activities (No. of Self Help Groups)	4,450	7,358



JICA staff with SHG of Sikkim Biodiversity Conservation and Forest Management Project

Achievements

- Under the Tripura Forest Environment Improvement and Poverty Alleviation Project, 61,754 hectares have been afforested and 8,533 hectares has been brought under agroforestry. Over 2,504 check-dams of different configurations have also been laid for soil and water conservation.
- Odisha Forestry Sector Development Project phase 1 was successfully implemented and after its success, the Government of Odisha replicated a similar program and introduced it as "AMA Jangala Yojana".
- JICA assisted project for 'Capacity Development for Forest Management and Personnel Training' has received the National Award for Excellence in Training at the inaugural National Symposium on Excellence in Training (NSET).



Bamboo workshop conducted by an expert from Japan in Tripura Forest Environmental Improvement and Poverty Alleviation Project

JICA's Strategy for Future

JICA aims to introduce innovative solutions for plantation/regeneration activities in forest areas in India. JICA's objective is to improve the livelihoods of people dependent on these forest activities for employment and income generation. In order to increase the forest cover in India, JICA aims to continue granting ODA loans in the forestry sector.

9 Agriculture

► Sector Challenges

Growth of Indian agriculture has historically been low, share of primary sectors (agriculture and allied sectors) is estimated at 17.4 per cent of the Gross Value Added (GVA) during 2016-17.

Net returns from major crops have either been falling or has been very volatile in recent years. The average annual increase in costs for crops exceeds the rise in prices.

India's farm yield is 30-50% lower than that of developed nations. Low use of farm technologies and farming techniques, decrease of soil fertility due to over fertilization and sustained pesticide use, and can lead to low agricultural productivity. JICA's support in the sector helps in solving such production challenges and improving farming techniques.



A farmer showing his improved farm produce achieved under the Himachal Pradesh Crop Diversification Promotion Project

► Figures at a Glance



24 Agriculture Projects have been supported in India with JICA's help



By Way Of JICA's Projects, Irrigated area has increased by 933,000 Hectares



19 ODA Loans, 14 Grant Aids and 17 Technical Cooperation's have been extended for the sector in India

► Overview of Japan's Cooperation

JICA has extended ODA loans of 271 billion Japanese Yen (approximately INR 16,000 crore) towards the Agriculture Sector since 1981/82.

JICA is supporting agricultural projects across Himachal Pradesh, Mizoram, Odisha, Rajasthan, Jharkhand, Andhra Pradesh and Telangana.



A woman farmer witnessed improvement in her farm vegetables after deploying the micro drip irrigation technique in Jharkhand Micro Drip Irrigation Horticulture Project



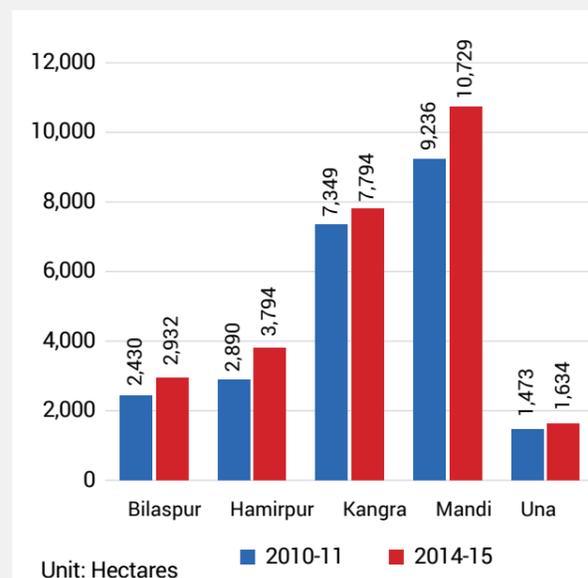
Lecture on effective use of soybeans for farmers in Sandralr area, Mandi under Project for Technical Cooperation Crop Diversification in Himachal Pradesh

► An Example of JICA's Support

With the aim of ensuring food self-sufficiency and improving livelihood for small farmers through crop-diversification, the 'Himachal Pradesh Crop Diversification Promotion' project (HPCDP) was started by Department of Agriculture, Government of Himachal Pradesh with support from JICA.

The Himachal Pradesh Crop Diversification Promotion' project has helped in increasing Vegetable Production Land in Bilaspur, Hamirpur, Kangra, Mandi and Una.

Increase in the vegetable production land in various districts under HPCDP



JICA expert team providing technical guidance on vegetable cultivation on sloping land under "The Project on Capacity Enhancement for Sustainable Agriculture and Irrigation Development in Mizoram"

Achievements

- In the JICA-supported Project for maximisation of Soybean Production in Madhya Pradesh, JICA supported to develop soybean cultivation technologies for small and underprivileged farmers, which doubled the productivity of soybean cultivation from 1 t/ha to 2 t/ha.
- JICA's association since 1991 with sericulture farmers of Karnataka, Tamil Nadu, Andhra Pradesh & Telangana has led to improvement in their skills in producing locally higher quality bivoltine cocoons.
- The Jharkhand Horticulture Intensification by Micro Drip Irrigation (MDI) Project with an aim to promote empowerment of women is in the initial implementation stage. Out of the targeted number, so far MDI system has been installed to over 1,000.



Meeting with the Swan Women Federation members under the Swan River Integrated Watershed Management Project

JICA's Strategy for Future

In the future, JICA aims to continue to contribute to the sector by enhancing agricultural land in the country using sustainable production solutions and self-sufficient measures. JICA's objective is to uplift and stabilize farmers' income, by improving agricultural productivity through construction/ renovation of irrigation facilities. JICA will continue to train farmers with best farming techniques which aims to improve food sufficiency in the country and alleviate poverty, by providing employment to agriculture dependent communities. The aim is to make farmers self-sufficient by increasing vegetation land and earn higher income.

10 Human Resource Development

► Sector Challenges

Development of human resource should be nurtured to the pace and scale of population increase in India, to maintain and accelerate economic growth in industrial and commercial fields. In addition to providing contemporary education and skills for the youth for enhanced career opportunities, there is an increasing need for developing higher education institutions in the areas of science and technology to address needs of the industrial sector and society, through technical innovation. Capacity development of senior and middle managers in the manufacturing sector is also needed for accelerating growth of this sector, which has remained flat for several decades at around 15% of Gross Domestic Product (GDP).



Students from university in Japan and IIT- H interacting with each other as part of academic exchange under JICA's FRIENDSHIP Project

► Figures at a Glance



Number of the Graduated Students of Senior Managers Course supported by JICA accumulate to 698 (from 2007-2018)



Number of the Graduated Students of Middle Managers Course supported by JICA accumulate to 419 (from 2007-2018)

► Overview of Japan's Cooperation

JICA has extended 31 billion Japanese Yen, (approximately Rs.1,600 Crore) (ODA Loan: 23 billion Japanese Yen, Grant Aid: 7.8 billion Japanese Yen) since 1988/89 towards the sector. JICA has also contributed towards Champions for Societal Manufacturing (CSM) Project, which has led to development of new business models and training of over 5,000 executives.



Professor with students in the Department of Computer Science at IIT-H

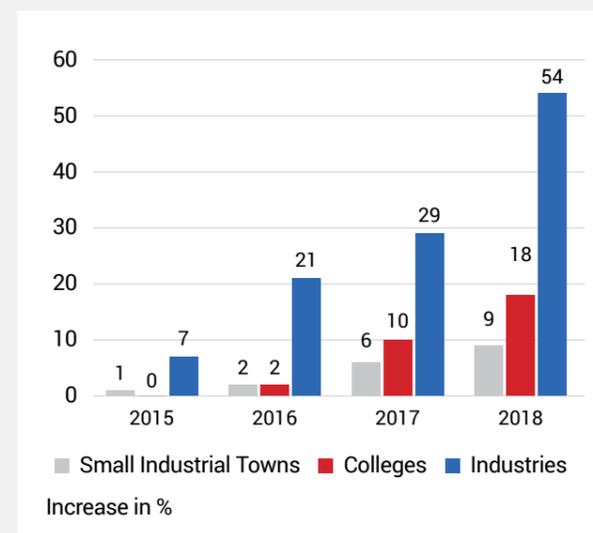


The campus building of IIT-H

► An Example of JICA's Support

JICA has contributed to empower more than 1,200 Small and Micro Industries through Visionary SME (VSME) activities. JICA has contributed to empower Visionary Learning Community of India (VLCI), which is a unique program under Visionary Leaders For Manufacturing Program (VLFM)/CSM community activity. It is implemented by strong community of Engineering College and Local SMEs leaders to provide practical engineering education to the students. This program enables students to be trained by/with SMEs which makes them industry ready and also gives an opportunity to the SMEs to permanently retain capable students with them, thus making it a win-win collaboration.

Year on Year comparison of Visionary Learning Community in India (VLCI) activities



Participants of Senior Management Course attending the VLFM/ CSM Seminar

Achievements

- JICA's ODA loan for Indian Institute of Technology Hyderabad (IIT-H) is facilitating development of infrastructure including International Guest House, Sports and Cultural Complex, Knowledge Center (Library), Research Center Complex, Technology Incubation Park, Convention Village, etc. and procurement of research equipment. Technical cooperation with IIT-H is facilitating linkages between IIT-H and academic institutions and private companies in Japan.
- JICA's assistance to the Indira Gandhi Open University (IGNOU) has facilitated upgradation of equipment for satellite broadcasting, from standard definition to high definition. As satellite broadcasting forms integral part of IGNOU teaching, this is benefiting several thousand students across India.
- The Champions for Societal Manufacturing (CSM) Project has led to a number of successes across development of new products, new markets, new business processes and new business models, through training of over 5,000 executives to serve as visionary leaders of Indian manufacturing.
- The successes include development by Sona-Koyo of an electronic steering system for off-road vehicles like golf carts & tractors, and development by Godrej & Boyce of 'ChotuKool' portable refrigerator, which uses a thermochip rather than a traditional compressor and doesn't require constant electricity to operate.

JICA's Strategy for Future

JICA's support to India is diversified to various areas of human resource development to contribute economic and social development of the country. JICA aims to empower the young talent of India, to learn from Japan's techniques and find innovative solutions for India. The projects funded by JICA aim to boost capacity development of senior and middle managers in the manufacturing sector, thereby improving quality of life and living standards.

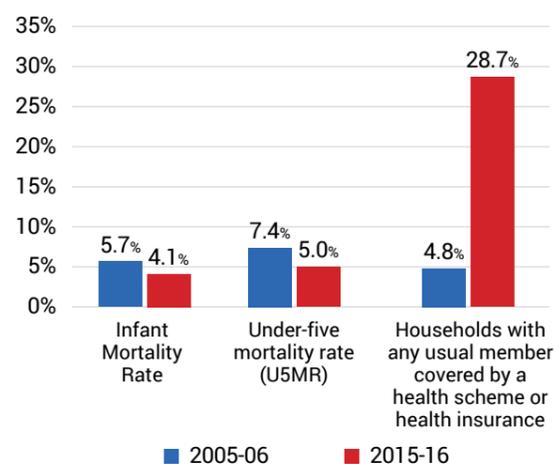
11 Health

► Sector Challenges

The Indian healthcare sector is growing at a brisk pace due to its strengthening coverage, services and increasing expenditure by public as well private players. Even though the public health system in India is largely under funded with only 1.2% of GDP expenditure on healthcare, India's competitive advantage lies in its large pool of well-trained medical professionals. Infant Mortality Rate (IMR) has registered 1.6% decline to 4.1% in 2015-16 from 5.7% in 2005-06.

JICA's intervention in the healthcare sector helps improve medical facilities in the country, thereby keeping a check on the key health indicators in the country.

Key Health Indicators in India



► Figures at a Glance



1 ODA Loan, 7 Grant Aids and 2 Technical Cooperations have been extended for the sector in India



Japan and India signed a memorandum of cooperation on October 29, 2018 in the field of Healthcare and Wellness with an aim to centralize management of healthcare distribution centers and improve access to hygienic/affordable toilets

► Overview of Japan's Cooperation

Assisting for provision of quality healthcare services to socially vulnerable groups. Official Development Assistance loans of 42.5 billion Japanese Yen, approximately INR 2,656 crore, extended since 1995/96. JICA has Health Projects in Tamil Nadu and Odisha amongst other states.



A child getting nebulised at Institute of Child and Health (ICH), Chennai



A doctor performing regular health check-up on a child at ICH

► An Example of JICA's Support

JICA is providing 25, 537 million Japanese Yen (approximately INR 1,548 crore) Official Development Assistance (ODA) loan to improve the quality of urban healthcare services in Tamil Nadu. Urban Healthcare Project in Tamil Nadu is aiming at strengthening the capacity of key hospitals by upgrading facilities and equipment, and human resources with the focus on Non Communicable Diseases (NCD), contributing to the improvement of the health sector in Tamil Nadu. The project is being implemented in 17 cities in Tamil Nadu. The components and the cities have been decided based on the population size, needs, and priority for the health facility development.

Through the project, JICA aims to scale-up access to the quality healthcare for all in a very close collaboration with Health and Family Welfare (H&FW), Government of Tamil Nadu (GoTN).



Prof Kakehi, JICA Expert, discussing the design of tertiary care hospitals under Tamil Nadu Urban Healthcare Project



The Physiotherapy unit at ICH

Achievements

- JICA has played an instrumental role in providing better access to innovative healthcare services in urban areas and promotes a healthy lifestyle in the state of Tamil Nadu.
- At the Institute of Child Health (ICH) and Hospital for children in Chennai, the new "user-friendly" Outpatient Department (OPD) building, minimizes the movement of patients and medical personnel and reinforces the life-saving functions through improved emergency department and provision of updated specialized equipment.
- Everyday, 2,000 patients visit the JICA supported OPD in Tamil Nadu, scaling up access to quality healthcare for all, especially to the underprivileged, who have been bereft of such services.



Weighing the child at ICH as part of general healthcare.

JICA's Strategy for Future

The healthcare sector in India is booming and JICA believes that the three core areas that need to be addressed on priority are: 1) Controlling infectious diseases, 2) Controlling infant and maternal mortality rate and 3) Providing easy access to health care facilities for the underprivileged. To ensure the overall development of health care in India, JICA is working towards promoting excellence in training the medical staff, providing equipment to hospitals and strengthening capacity of human resources with the focus on Non-Communicable Diseases.

12 Knowledge Co-Creation Programs

Knowledge Co-Creation contributes to human resource development utilizing Japan's technology, skills & knowledge

► About JICA KNOWLEDGE CO-CREATION PROGRAMS (KCCP)

JICA's Knowledge Co-Creation Programs are a form of technical cooperation that JICA carries out in Japan and other countries.

Japan has formed its social system and organizational structure in such a way, which is called "Japanese model". If "seeing is believing", then experiencing is

understanding. By joining JICA's program in Japan, people from emerging countries come to a setting surrounded by Japanese society and its organizations, where they can discuss the circumstances in their home countries and develop an understanding of social conditions and values very different from their own.



Capacity Development in Rail Welding for Ministry of Railway, IR, CRS and DFCCIL under the "Project on Capacity Development for Railway Safety"



Participants for practical training of erosion control works in Hillside regarding the "Project for Natural Disaster management in Forest Area of Uttarakhand"

The experience imparts valuable knowledge that could be obtained in no other way.

In addition to providing unique knowledge to personnel, this sort of technical cooperation stimulates people to make their own decisions, which is a crucial element for human resource development along with other assistance schemes. JICA's Knowledge Co-Creation programs are therefore a major component of Japan's international cooperation programs, receiving nearly 10,000 participants each year from all over the world.

The majority of the participants are from governmental or public organizations. However, there have also been

participants from non-governmental organizations (NGOs) and private companies. Japan has enlisted cooperation from a wide range of levels including government, universities, companies and NGOs, creating a system capable of responding to any sort of need for advanced technology to expertise in vitalising villages. In terms of scale and available resources, there is no other program in the world that can compare to JICA's Knowledge Co-Creation Programs, which have become one of the cornerstones of Japan's international cooperation.



Under the Counter Part Training Program, participants learnt best practices for sustainable forest management and integrated watershed management



JICA's Knowledge Co-Creation programs is a form of Technical Cooperation which shares Japan's experiences.

Volunteers

Japan Overseas Cooperation Volunteer (JOCV) and Senior Volunteer (SV)

The JICA Volunteers promote international cooperation through the sharing of knowledge and experience and work as a bridge between the people of India and Japan.

► About the JOCV and SV Programme

The JICA Volunteer and Senior Volunteer programs support a wide range of activities by Japanese citizens who intend to cooperate in the economic and social development as well as in the reconstruction of emerging countries. Through such activities, the Volunteers can not only contribute to the development of the recipient countries but also gain valuable experience in terms of international goodwill, mutual understanding and they are also able to widen their international perspectives. The JICA Volunteer

activities have earned high acclaim from the recipient countries and are also being praised in Japan. The JICA Volunteers possess backgrounds, knowledge and experience related to the requirements of the recipient countries. They live and work together with the local communities, speak their local languages and carry out activities with emphasis on self-reliant efforts and fostering mutual understanding. "Together with the local community" is the motto of JICA Volunteer programs.



A JOCV swimming coach giving swimming lessons to children in Bhubneshwar, Odisha



Community Development Officer interacting with the people in Tamil Nadu

Salient Features of JICA Volunteers

- They are dispatched based on the requests from the recipient countries
- They have a voluntary mind and possess technical skills and practical experience
- They develop work plans with their local counterparts, which reflect the needs and interests of the counterparts
- They work together with the local communities at the grass root level



Japanese language teacher teaching Japanese to her student in Dehradun



Occupational Therapist deployed in Kolkata

JICA Volunteers in India

In India, the JICA Volunteers programme commenced in 1966. From the time of commencement till the present time, over 200 volunteers have been dispatched across India in various fields such as education, health, agriculture, community development, sports, empowerment for disabilities etc. (Since the year 2014, the Senior Volunteers (SV) programme has been introduced in India. In addition, As of March 2019 Senior Volunteers should have minimum 15 years' experience in their various fields.) Currently, 30 JICA Volunteers are working all over India in the field of community development, sports, Japanese language teachers and empowerment for disabilities peoples and so on.

14 JICA Partnership Program

Partnership program was introduced in 2002 to support and cooperate with the implementation of projects formulated by Japanese NGOs, Japanese local governments, and Japanese universities.

► About JICA Partnership Program (JPP)

Recognizing the growing importance of civil societies in international cooperation, the JICA Partnership Program (JPP) was introduced in 2002. The program supports the implementation of projects formulated by Japanese NGOs, Japanese local governments and Japanese universities to utilize their accumulated knowledge and experience in activities for developing countries. JPP projects aim to meet the diverse needs

of developing countries and to strengthen collaboration between communities in both developing countries and Japan. In India, JPP was started in 2004 and various projects have been implemented in the field of Agriculture, Rural development, Health, Women's empowerment and Tourism to contribute towards social and economic development at the grassroots level.



Photo Courtesy: ASHA



Photo Courtesy: JICA



Photo Courtesy: TPAK



Women's Safety Net Project in Dehradun, Uttarakhand

"Establishment of Prevention Programs against Gender Based Violence and Safety Net in High Poverty Rural Settlements"/Terra People ACT Kanagawa (TPAK)

Maternal and Child Health Project in Allahabad, Uttar Pradesh

"Improvement of Integrated Mother and Child Health by Collaboration between the Rural Health Volunteers (RHV) and Government Health Staff"/ASHA = Asian Sustainable Holistic Approach

Japanese NGOs, Japanese local governments and Japanese universities utilize their accumulated knowledge and experience in assistance activities for developing countries.

Japanese Assistance to INDIA: Timeline

1958

First ODA loan to India to support 2nd 5-Year Plan.

1966

First Technical Cooperation to India, for paddy cultivation. First Japan Overseas Cooperation Volunteers to

1981

First loan to agriculture sector, for fertilizer project at Hazira, Gujarat.

1982

First loan to transport sector, for Bombay suburban railways modernization.

1988

First assistance (grant aid) to education sector, for upgrading broadcast equipment at Indira Gandhi National Open University (IGNOU), Delhi.

First loan for energy savings, in Micro, Small & Medium Enterprises (MSMEs). Seven loan commitments made subsequently to continue this assistance until 2019.

First loan for irrigation, for 71 km canal development at Upper Kolab, Odisha.



1991

Emergency loan to mitigate economic crisis.

First loan to forestry sector, for afforestation along Indira Gandhi canal, Rajasthan.

First assistance (Technical Cooperation) for silk-farming, in Karnataka, Tamil Nadu, Andhra Pradesh & Telangana. The assistance continued till 2015.



1992

First loan to Yamuna Action Plan (YAP), for sewage treatment capacity augmentation. Two loan commitments made subsequently to continue this assistance until 2017.

1995

First assistance (grant aid) to health sector, for improving medical equipment at Karawati Saran Children's hospital, Delhi.

1997

First loan to Delhi Metro. 13 loan commitments made subsequently for development of 306 km of this metro.



Courtesy: Shinichi Kuno

2005

First loan for Ganga Action Plan at Varanasi.

2006

Loan for rural electrification in Andhra Pradesh, Telangana, Madhya Pradesh & Maharashtra.

First loan to Bangalore Metro. Two loan commitments made subsequently for development of 60 km of this metro.

Resumption of Japan Overseas Cooperation Volunteers program.



2007

Start of technical cooperation for Visionary Leaders For Manufacturing (VLFM) project, to strengthen Indian manufacturing sector.

2008

First loan to Chennai Metro. Three loan commitments made subsequently for development of 46 km of this metro.

First loan to Kolkata East West Metro for development of 27 km of this metro.

Loan for reducing dependence on fluorosis causing groundwater in Tamil Nadu.



2009



First loan for dedicated railway freight corridor between Delhi & Mumbai. Three loan commitments made subsequently for development of 1,500 km of this corridor.

2011

First loan for development of renewable energy sources. A loan commitment made subsequently to continue this assistance till 2020.

2013

Loan for innovative Tamil Nadu Investment Promotion Program to improve investment climate in Tamil Nadu.

Start of study for Intelligent Transport System in Bengaluru & Mysore.

Expansion of VLFM to Champions for Societal Manufacturing (CSM) project.



2014

Loan & technical cooperation for development of Indian Institute of Technology Hyderabad.

Loan for development of Mumbai Metro Line III.

2015

Preparation of Master Plan for Chennai-Bengaluru Industrial Corridor.

2016

First time Senior Volunteers (SV) were dispatched to India as Japanese Language Teachers.

Loan agreements signed for various projects such as Chennai Metro Project (IV) and Ahmedabad Metro Project (I).

JICA signed agreements with the Government of India to provide Official Development Assistance (ODA) loan for various projects such as the development of the metro rail system in Ahmedabad, Gujarat and Chennai, Tamil Nadu.

Signing the Memorandum for the General Consultancy of the Mumbai - Ahmedabad High Speed Railway Construction Project.



2017

Loan Agreement signed with the Mumbai Metropolitan Region Development Authority (MMRDA) to implement the Trans-Harbour Link Project in Mumbai.

Loan Agreement to Provide Assistance for North-East Road Network Connectivity Improvement Project (Phase 1)

2018

Loan Agreement Signed with the Department of Economic Affairs (DEA), Ministry of Finance, Government of India for the Mumbai - Ahmedabad High-Speed Rail Project.

2019

Loan Agreement signed with the Department of Economic Affairs (DEA), Ministry of Finance, Government of India for "Program for Japan-India Cooperative Actions towards Sustainable Development Goals in India" to help India's policy actions on the Sustainable Development Goals (SDGs).

Mr. Matsumoto and Dr. Mohapatra, holding up the signed loan agreement of Program for Sustainable Development Goals.



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